REMARKS

In the Office Action dated March 5, 2004, the response time to which has been extended by concurrently filed request for an appropriate extension of time, claims 1-8 are rejected under 35 U.S.C. § 103 (a).

However, for the reasons set forth below and in light of the attached Declarations, it is respectfully submitted that Applicants' invention as set forth in claims 1, 3, 7, and 8, and new claim 9 includes features which are not anticipated by the cited references, taken singly or in the various combinations posed by the Examiner. Reconsideration is, therefore, respectfully requested.

Applicants and Applicants' attorney would like to thank Patent Examiner M. Graham for his time and courtesies extended during a personal interview conducted on April 22, 2004. During the interview, proposed amendments to claim 1, as substantially set forth herein were presented to and discussed with the Examiner. The Examiner suggested that further amendments would be considered.

In the Office Action, claims 1 and 8 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Lo. The Examiner contends that Lo discloses the claimed device with the exception of the wall thickness and modulus. However, the Examiner concludes that absent a showing of unexpected results, the claimed thickness and modulus would obviously have been suitable for the ordinary skilled artisan depending upon the strength versus weight characteristics desired by the player.

As established by the attached Declaration of Joseph Lewandowski, Lo intentionally makes his shaft rigid to reduce deformation. The front end of the shaft includes a solid front connector or ferrule made from carbon fiber so that "the rigidity of the cue is substantially increased" (Lo, page 4, lines 21-27). As also established by the Declaration of Joseph Lewandowski, carbon fiber has a higher modulus of elasticity and is more rigid than wood. This increased rigidity and increased tip end weight will increase cue ball deflection by resisting any lateral deformation achieved by the Applicant in the cue set forth in claims 1 and 8.

It is respectfully submitted that the concurrently submitted Declaration of Karim Belhaj establishes a commercial success of Applicants' reduced tip end mass

and stiffness/weight ratio tip end bore technology. Although the sales of the Predator shaft using this technology are for a wood shaft covered in the parent application, from which this application claims priority, the same technology is used herein. The concurrently submitted Declaration of the inventor, Allan McCarty, establishes further unexpected results in terms of further reduced cue ball deflection of a cue shaft made in accordance with claims 1 and 8 as compared to Applicants' wood Predator 314 shaft covered by the claims of the parent application.

It is respectfully submitted that Lo is directly opposed to reducing tip mass and providing a stiffness/weight ratio in the tip end of the cue for approximately 4 to 5 inches from the tip end of the cue to form a means for enabling the tip end of the cue to laterally deflect upon impact with the cue ball to minimize deflection of the cue ball from its intended path of movement.

It is respectfully submitted that for these reasons as supported by the attached Declarations, Applicant has established commercial success of his technology, unexpected results, and has demonstrated how his invention in claims 1, 8 and 9 patentably defines over Lo.

Claims 2-4 rejected under 35 U.S.C. § 103 (a) as being unpatentable over Lo in view of Thorpe. The Examiner cites Thorpe merely for showing the use of epoxy with carbon fiber to form a cue shaft. However, Thorpe has not been cited by the Examiner nor does Thorpe teach any stiffness/weight ratio tip end bore technology as set forth by the Applicant in claim 1, from which claim 3 depends.

For these reasons, it is respectfully submitted that Applicant's invention as set forth in claim 3 patentably defines over the combination of Lo and Thorpe as posed by the Examiner.

Claim 7 is rejected under 35 U.S.C. § 103 (a) as being unpatentable over Ghezzi or Seeman. The Examiner contends that Ghezzi or Seeman discloses the claimed device with the exception of the wall thickness of the shell. Absent a showing of unexpected results, the Examiner contends that the claimed thickness would obviously have been suitable for the ordinary skilled artisan.

However, it is respectfully submitted that cue shafts are made to have an overall weight of approximately 18-19 ounces, regardless of the material used in

their construction, so as to be comparable to the conventional wood cues which have been in use for the last century. Allan McCarty's Declaration establishes that the known cue shafts formed of non-wood material have thin wall construction thicknesses of at least 0.060 inches. This is considerably higher than that set forth by the Applicant in claim 1, from which claim 7 depends. It is submitted that the Declaration of Allan McCarty also establishes the unexpected results provided by Applicant' invention as set forth in claims 1 and 7.

The Declaration of Joseph Lewandowski further establishes that the length of the tip bore in Ghezzi is not defined. Any weight reduction achieved by the bore in Ghezzi is outweighed by the mounting of the metal spring wire fastening device in the bore. The metal spring increases mass thereby offsetting any massive weight reduction made by the use of the bore. Further, the metal fastener will increase rigidity of the tip end of the bore thereby increasing cue ball deflection over that of a conventional wood shaft. It is submitted that this clearly shows the lack of teaching by Ghezzi of any tip end mass reduction while maintaining a stiffness/weight ratio enabling tip end deflection upon impact of the cue shaft with a cue ball as set forth by the Applicant in claims 1 and 7.

The shaft of Seeman, as verified by the attached Declaration of Joseph Lewandowski, is made of metal. Even with the hollow bore extending along the portion of the length of the shaft of Seeman, the shaft of Seeman will have increased mass as compared to a conventional wood shaft of the same construction. Aluminum is also substantially more rigid than wood. As a result, the increased rigidity and weight of the shaft of Seeman will increase cue ball deflection.

Further, it is respectfully submitted that Seeman is devoid of any teaching of forming the bore to extend from the tip end of the shaft. The converging tapered cross section of the bore in Seeman extending from the middle of the forward end of the shaft toward the tip end would appear from the drawing to end substantially short of the tip end.

For these reasons, it is respectfully submitted, that Applicant's invention set forth in claim 7 patentably defines over Ghezzi or Seeman as posed by the Examiner.

Finally, claims 1-8 are rejected under obviousness-type double patenting over claims 1-9 of US Patent No. 6,110,051.

Although the Applicant does not agree with the Examiner that the pending claims are obvious over the claims of his cited patent, in order to expedite prosecution, Applicant makes an offer of filing a terminal disclaimer to overcome the obviousness-type double patenting rejection upon receiving an indication of allowable subject matter in this application.

For the above reasons, it is respectfully submitted that Applicant's invention as set forth in claims 1, 3, 7, 8, and 9 includes features which are not suggested or rendered obvious by the cited references, taken singly or in any permissible combination. Thus, claims 1, 3, 7, 8, and 9 are submitted to be in condition for allowance, a notice of which is respectfully requested.

Respectfully submitted,

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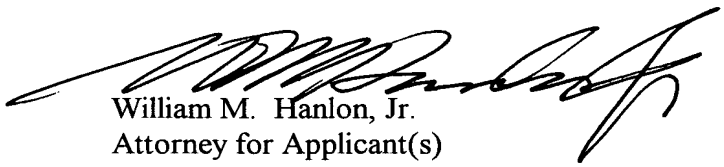

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